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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,635	04/21/2006	Christopher N. Bowman	40281.0001USWO	5692
23552 7590 03/24/2009 MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903				
EXAMINER				
BERMAN, SUSAN W				
ART UNIT		PAPER NUMBER		
1796				
MAIL DATE		DELIVERY MODE		
03/24/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/576,635

Applicant(s)

BOWMAN ET AL.

Examiner

/Susan W. Berman/

Art Unit

1796

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-25, 29, 30, 32-34 and 44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-25, 29, 30, 32-34 and 44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 9-11-06
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Election/Restrictions

Applicant's election without traverse of Group III, now claims 23-25, 29, 30, 32-24, 44 in the reply filed on 1-9-2009 is acknowledged. Claims 1-22, 26-28, 31 and 35-43 have been canceled.

Claim Rejections - 35 USC § 102/35 USC § 103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Jochum et al (5,100,929). Jochum et al disclose dental compositions comprising thiol-enes and a photoinitiator and filler wherein the compositions contain at least 10% by weight polythiol compound (column 2, line 33, to column 3, line 19). Jochum et al teach that camphorquinone and acyl phosphine oxides are known as initiators responsive to visible light that produce a pronounced layer of smear in UV curing compositions and that this disadvantage is overcome by the disclosed

compositions (column 2, lines 9-26). Fillers are taught from column 6, line 64, to column 7, line 15.

Claims 24, 25, 29, 30, 32-34 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Jochum et al. The disclosure of Jochum et al is discussed herein above. With respect to claims 24 and 25: Jochum does not specifically disclose the recited percentage ranges of thiol functional groups. However, since Jochum et al teach that the compositions contain at least 10% by weight polythiol compound, the instantly recited ranges are considered to be within the disclosure of Jochum et al, in the absence of evidence to the contrary. With respect to claims 29, 30 and 32-34, Jochum et al do not mention the specified properties recited. However, since the compositions disclosed by Jochum et al comprise the same components as are set forth in instant claim 23, the instantly claimed properties are expected to be inherent to the prior art polymerized products, in the absence of evidence to the contrary.

Claim 44 is rejected under 35 U.S.C. 103(a) as obvious over Jochum et al alone or in view of Rheinberger et al (5,889,132). The disclosure of Jochum et al is discussed herein above. Jochum et al teach that camphorquinone and acyl phosphine oxides are known as initiators responsive to visible light for polymerizing dental compositions. Rheinberger et al disclose thiol-ene dental compositions and photoinitiators therefor, including camphorquinone and acyl phosphine oxides (column 28, lines 39-50). It would have been obvious to one skilled in the art at the time of the invention to substitute camphorquinone for the acyl phosphine oxide

photoinitiator in the compositions disclosed by Jochum et al. Jochum et al provide motivation by teaching that camphorquinone, as well as acylphosphine oxides, is well known for visible initiation of dental compositions. Rheinberger et al specifically teach that camphorquinone or acylphosphine oxides are suitable photoinitiators for thiol-ene dental compositions. One skilled in the art at the time of the invention would have been motivated by a reasonable expectation of successfully photoinitiating polymerization of the thiol-ene dental compositions taught by Jochum et al, as taught by Rheinberger et al in analogous dental compositions.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to /Susan W. Berman/ whose telephone number is 571 272 1067. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SB
3/20/2009

/Susan W Berman/
Primary Examiner
Art Unit 1796